

IN THE CLAIMS:

The claims remain as follows:

1. (Previously Presented) A method for managing structured data having one or more repeating fields, comprising:
 - receiving a hierarchical data structure containing the structured data wherein the structured data is annotation data related to an annotated data object and wherein at least two instances of a repeating field are contained in the structured data;
 - parsing the structured data to identify the repeating fields;
 - generating an ordinal value for each instance of the repeating fields, each ordinal value indicating an order in which a corresponding instance of a repeating field occurs in the hierarchical data structure as received; and
 - storing the structured data and ordinal values in one or more relational tables.
2. (Original) The method of claim 1, wherein storing the structured data and ordinal values in one or more relational tables comprises storing instance data from a repeating field in a common relational table.
3. (Original) The method of claim 2, wherein the common relational table has at least a column for the instance data, a column for corresponding ordinal values, and a column for a key value to identify a data structure associated with the repeating field.
4. (Original) The method of claim 1, wherein the structured data contains at least one repeating group of one or more fields, and the method comprises generating a group ordinal value for each instance of the repeating group of fields, each ordinal value indicating an order in which a corresponding instance value of the repeating group of fields occurs in the structured data as received.
5. (Original) The method of claim 4, wherein the at least one repeating group contains at least one of the repeating fields.

6. (Original) The method of claim 1, wherein receiving the structured data in a hierarchical format comprises receiving the structured data in a hierarchical format as a Simple Object Access Protocol (SOAP) message.
7. (Original) The method of claim 1, wherein the structured data is received as input via an interface generated based on a template structure defined by one or more fields or groups of fields.
8. (Previously Presented) The method of claim 7, wherein:
the template structure is selected based, at least in part, on the annotated data object.
9. (Original) The method of claim 1, further comprising:
receiving a request for the structured data;
retrieving the structured data and ordinal values from the one or more relational tables;
assembling the structured data in a hierarchical data structure based on the hierarchical data structure in which it was received, with a position of instance values of repeated fields within the hierarchical data structure determined by corresponding ordinal values; and
returning the assembled hierarchical data structure.
10. (Previously Presented) A computer-readable medium containing an executable component for managing structured data having one or more repeating fields, which, when executed by a processor, performs operations comprising:
receiving a hierarchical data structure containing the structured data wherein the structured data is annotation data related to an annotated data object, and wherein at least two instances of a repeating field are contained in the structured data;
parsing the structured data to identify the repeating fields;

generating an ordinal value for each instance of the repeating fields, each ordinal value indicating an order in which a corresponding instance of a repeating field occurs in the hierarchical data structure as received; and

storing the structured data and ordinal values in one or more relational tables.

11. (Original) The computer-readable medium of claim 10, wherein storing the structured data and ordinal values in one or more relational tables comprises storing instance data from a repeating field in a common relational table.

12. (Original) The computer-readable medium of claim 11, wherein the common relational table has at least a column for the instance data, a column for corresponding ordinal values, and a column for a key value to identify a data structure associated with the repeating field.

13. (Original) The computer-readable medium of claim 10, wherein the structured data contains at least one repeating group of one or more fields, and the method comprises generating a group ordinal value for each instance of the repeating group of fields, each ordinal value indicating an order in which a corresponding instance value of the repeating group of fields occurs in the structured data as received.

14. (Original) The computer-readable medium of claim 10, wherein the operations further comprise:

receiving a request for the structured data;

retrieving the structured data and ordinal values from the one or more relational tables;

assembling the structured data in a hierarchical data structure based on the hierarchical data structure in which it was received, with a position of instance values of repeated fields within the hierarchical data structure determined by corresponding ordinal values; and

returning the assembled hierarchical data structure.

15. (Previously Presented) A system for managing structured data, comprising:
a set of template structures, each specifying one or more fields;
a client component configured to generate interfaces based on the template structures for receiving the structured data and to generate a hierarchical data structure containing the structured data, wherein the structured data contains one or more repeating fields with multiple instance values and wherein the structured data is annotation data related to an annotated data object; and
a server component configured to receive the hierarchical data structure from the client component, parse the structured data contained therein, and store the structured data in one or more relational tables with ordinal values for each instance of the repeating fields, wherein each ordinal value indicates an order in which a corresponding instance value of a repeating field occurs in the hierarchical data structure as received.
16. (Previously Presented) The system of claim 15, wherein the one or more relational tables comprises a common relational_table for storing instance data from a repeating field.
17. (Original) The system of claim 16, wherein the common relational table has at least a column for the instance data, a column for corresponding ordinal values, and a column for a key value to identify a data structure associated with the repeating field.
18. (Original) The system of claim 15, wherein the structured data contains at least one repeating group of one or more fields, and the method comprises generating a group ordinal value for each instance of the repeating group of fields, each ordinal value indicating an order in which a corresponding instance value of the repeating group of fields occurs in the structured data as received.
19. (Original) The system of claim 15, wherein the server component is further configured to:

receive a request for the structured data from the client component;
retrieve the structured data and ordinal values from the one or more relational tables;
assemble the structured data in a hierarchical data structure based on the hierarchical data structure in which it was received, with a position of instance values of repeated fields within the hierarchical data structure determined by corresponding ordinal values; and
return the assembled hierarchical data structure to the client component.

20. (Previously Presented) The system of claim 15, wherein:
the structured data is received via an interface generated based on a template structure selected, at least in part, based on the annotated data object.